

NATIONAL WEATHER SERVICE

Western Region Notes

JUNE 17,2004

REGIONAL DIRECTOR'S OFFICE



WR Director Vickie Nadolski thanks PAO Marilu Trainor for her hard work.

Western Region Says "Good-Bye" to Marilu: WRH employees said good-bye to Marilu Trainor on Tuesday, June 15. Staff members gathered for a farewell pizza party to wish her well. Marilu has served as Western Region's Public Affairs Officer for the past 10 years and has worked diligently to promote the agency.

Marilu has accepted a public affairs job at Hill Air Force base starting June 27. Congratulations, Marilu, and good luck!

AROUND THE REGION



WFO Eureka staff J.J. Brost and Carol Ciliberti view the potluck spread.

WFO Eureka Hosts "Asian-Pacific" Lunch: WFO Eureka Diversity Focal Point J.J. Brost organized a station diversity activity on Friday, May 21. WFO staff members gathered for an "Asian-Pacific Islander" potluck lunch.

Eureka employees brought in their favorite foods including sushi, Chinese dishes, Thai dishes, and pineapple.



WFO Las Vegas Staff Members Compete in Charity Golf: WFO Las Vegas employees Andy Gorelow, Don Maker, Barry Pierce, and Larry Jensen competed in a charity golf event on June 13 at Paiute Golf Course in Las Vegas to benefit the March of Dimes. While they didn't win, they did finish with a respectable best-ball score of 67!

Photo of the Week:



WFO San Diego was recently asked to meet the NOAA Ship David Starr Jordan at the University of California Scripps Marine Facility in San Diego to obtain a barometer comparison/calibration. Pictured at the right is HMT Noel Isla with NOAA Field Ops officer Ensign Lundy Pixton.

METEOROLOGICAL SERVICES DIVISION

<u>Statement of the Week</u>: This week's Statement of the Week is a Hazardous Weather Outlook (HWO) issued by lead forecaster Alex Tardy of WFO Salt Lake City. Alex did an excellent job of highlighting the potential for critical fire weather conditions in the extended period of the forecast. Critical fire weather patterns should be included in the HWO as another means of communicating hazards to the community. In this situation, Salt Lake City's "problem of the day" was in the extended period. Good work Alex!

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HAZARDOUS WEATHER OUTLOOK NATIONAL WEATHER SERVICE SALT LAKE CITY UT 600 AM MDT FRI JUN 4 2004

UTZ012>021-051300-

CASTLE COUNTRY-CENTRAL AND SOUTHWEST MOUNTAINS-GLEN CANYON RECREATION AREA/LAKE POWELL-HENRY MOUNTAINS-SAN RAFAEL SWELL-SANPETE/SEVIER VALLEYS-SOUTH CENTRAL UTAH-SOUTHWEST UTAH-UTAH'S DIXIE AND ZION NATIONAL PARK-WEST CENTRAL UTAH-

600 AM MDT FRI JUN 4 2004

THIS HAZARDOUS WEATHER OUTLOOK IS FOR CENTRAL AND SOUTHWEST UTAH.

.DAY ONE...TODAY

HOT TEMPERATURES AND VERY LOW HUMIDITY ARE EXPECTED THIS AFTERNOON AND EARLY THIS EVENING WITH BREEZY CONDITIONS DEVELOPING AT SOME LOCALES. THIS COMBINATION WILL CAUSE LOCALIZED EXTREME FIRE WEATHER CONDITIONS.

.DAYS TWO THROUGH SEVEN... SATURDAY THROUGH THURSDAY

IN ADDITION TO VERY LOW HUMIDITIES...STRONG GUSTY WINDS ARE EXPECTED TO DEVELOP OVER THE SOUTHERN HALF OF UTAH SUNDAY THROUGH TUESDAY AFTERNOON. THIS MAY CONTINUE INTO WEDNESDAY. THIS COULD LEAD TO EXTREME FIRE WEATHER CONDITIONS FOR SEVERAL DAYS.

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WFO Eureka Marine Outreach Events in May-June: Mid-May to mid-June was "Oceans Month" in Humboldt County schools (northwest California). Meteorologist Intern J.J. Brost and WCM John Lovegrove conducted school visits and discussed how the oceans and atmosphere interact. Beach safety was also a topic of discussion. Several tours of the WFO were provided to school groups during the period.

On June 1, WFO Eureka WCM John Lovegrove and Service Hydrologist Troy Nicolini talked to approximately 50 employees at Redwood National and State Parks on the Northern California coast on beach safety topics. Subjects included wave formation and movement, "sneaker" waves, rip currents, and other cold water hazards. The NWS will be invited back for an all-hands Park meeting later in the summer.



Mark Moede (left) visits with Chris Ingalls, a lifeguard at the San Diego Lifeguard and Harbor Patrol Dispatch Center.

Marine Outreach: Mark Moede, lead forecaster at WFO San Diego, visited the San Diego Lifeguard and Harbor Patrol Dispatch Center on June 4. San Diego lifeguard Chris Ingalls, gave a tour of the facility. The Dispatch Center uses the NWS website on a daily basis to get the latest Coastal Weather Forecast and any Marine Weather Statements or Warnings. Tidal overflow statements alert them to threat of flooding in low lying areas on Mission Beach near Belmont Park. They also find the satellite and radar loops very helpful.

During the winter season, they close the harbor entrance when the combination of large westerly

swells and strong winter storms strike the Southern California coast. These powerful swells turn the harbor entrance into a sea of churning whitewater that is too dangerous to navigate safely.

Since the Harbor Patrol office is in the harbor and protected from the ocean, they call lifeguard stations at Ocean Beach, Mission Beach, and LaJolla every three hours for surf reports. (Lifeguards at these three stations reports surf and swell conditions). The Harbor Patrol takes the average of the 3 reports and relays this observation to WFO San Diego.

<u>WFO Eureka Participates in Hazmat Exercise</u>: WFO Eureka WCM John Lovegrove participated in a tabletop hazmat exercise, conducted by the Humboldt County Office of

Environmental Health. This exercise was a precursor to a full-field exercise scheduled for July 27. The Atmospheric Research Laboratory's (ARL) "HYSPLIT" dispersion model was demonstrated to participants. Fire and police departments from around Humboldt Bay, as well as CalTrans (California Dept. of Transportation), county schools, public works, Humboldt State University, emergency services, and the U.S. Coast Guard attended.

WFO Flagstaff Cooperative Observer Appreciation Day: WFO Flagstaff invited all cooperative observers serving the Flagstaff County Warning Area to an Appreciation Day on June 4. Twenty cooperative observers from northern Arizona attended the event. Tours of the WFO were given to the participants, which included a presentation on the NWS mission by MIC Brian Klimowski and a demonstration of the Advanced Weather Interactive Processing System (AWIPS) and the Interactive Forecast Preparation System (IFPS) by SOO Mike Staudenmaier.

During the afternoon, the participants gathered for an appreciation ceremony. A presentation was given by DAPM Byron Peterson, which illustrated the significance of the Cooperative Observer Program (COOP) and demonstrated how the COOP observations are used in a wide variety of meteorological applications and in everyday life. Each cooperative observer was individually recognized for their contributions and given a certificate of appreciation. COOP Manager Larry Riggs made the awards unique by including hand-lettered calligraphy on the awards. After the ceremony, participants were invited outside for the radiosonde launch at 4:00 p.m.

The event gave cooperative observers an opportunity to meet other Cooperative Observers and to gain an understanding that their work is important, appreciated, and of great value to the community. Many of those who attended had never been to the WFO before and went away with a better understanding of what the Weather Service is all about!



Anna Mae Demming (COOP Observer for 56 years from Payson, AZ) receives an award of appreciation from Flagstaff MIC, Brian A. Klimowski



DAPM Byron Peterson explains the significance of the upper air program to a group of cooperative observers

<u>WFO Hanford WCM Writes Article for Soaring Magazine</u>: An article about meteorological support for glider contests appeared in the June edition of Soaring

Magazine, the monthly journal of the Soaring Society of America. The magazine requested the article from Dan Gudgel, WFO Hanford WCM. In the 5-page article, Dan detailed how he works with the rest of the contest management team to brief glider pilots, determine flight routes, and support the event safety. Dan is well known among sail plane enthusiasts, lending his support to glider contests annually. Dan has worked not only as a contest meteorologist for local, national, and international events, but also often serves as a tow-plane pilot for contestants.



WCM Dave Soroka performs "tornado in a bottle" experiment

WFO Monterey Participates in "Fisherman's Fiesta": WFO Monterey/San Francisco Bay Area WCM Dave Soroka represented NWS during the semi-annual "Fishermen's Fiesta," held at the Monterey Harbor on June 5. NWS participated in this event along with NOAA's Monterey Bay National Marine Sanctuary and Bay Watershed Education and Training Program. Among other activities, Soroka demonstrated a "tornado in a bottle" to several participants. More than 150 people attended the event. This event is an example of how NOAA offices in the greater San Francisco Bay Area work together on outreach programs in support of the

NOAA San Francisco Bay Regional Coordination Program, established as an outgrowth of a recent NOAA Program Review.



Major General Timothy Lowenberg, Director of the Washington Military Department which oversees the state of Washington's Emergency Management Division, gives the keynote address. Background (L to R), Chris Hill, MIC WFO Seattle; Sheila Holden, PacificCorp Power; Steve Bailey, Pierce County Emergency Management; Glen Woodbury, Director, Washington State Emergency Management.

WFOs Seattle and Portland Dedicate Weather Radio Sites: WFOs Seattle and Portland jointly held a NOAA Weather Radio (NWR) dedication ceremony on June 11, 2004, at Camp Murray, WA to formally dedicate two new weather radio transmitters near Olympia, WA and Woodland, WA. With the addition of these transmitters, the state of Washington now meets the national goal of making NWR broadcasts available to 95 percent of the state's population. In the past 10 years, weather radio coverage in the state of Washington has grown from nine weather radio transmitters to 21. NWS offices who share warning responsibilities for Washington (Seattle, Spokane, Portland, and Pendleton) all contributed to this effort.

The NWR transmitter near Olympia provides residents in the Nisqually River Basin their first-ever direct warning system for river or volcanic hazards. It also provides expanded weather radio service to residents in

Hood Canal, south Puget Sound, east Grays Harbor County, and as far east as Mt. Rainier National Park. This project was a partnership between WFO Seattle and South Sound Broadcasting.

The NWR transmitter near Woodland was a public-private partnership between the WFO Portland and PacifiCorp, a large hydro-electric power utility corporation in the Pacific Northwest. This transmitter provides real-time weather and flood information to

residents living along the Lewis River Basin as well as residents of Cowlitz and Clark Counties.

Both of these public-private partnership projects were born in part from the need to have emergency warning communications in both the Lewis River and Nisqually River basins in the wake of the February 1996 floods and the August 2001 Mt Rainier lahar scare.

Western Region and Central Region WCMs Hold Meeting: Warning Coordination Meteorologists Rick Dittmann (WFO Great Falls), Jim Scarlett (WFO Billings), and the soon-to-be-retired Dave Toronto (WFO Salt Lake City) met with John Griffith (WFO Cheyenne) and Chris Jones (WFO Riverton) for a sub-Regional WCM workshop June 8-9 in Buffalo, Wyoming. Topics discussed included fire weather grids and fire weather products, IFPS outreach, awareness week activity, NOAA Weather Radio promotion, Ewarn, FEMA courses, and Dave Toronto's career achievements. The meeting provided a common ground to share ideas, including enhancing coordination and collaboration procedures, both within Western Region and between offices in other regions.

Monsoon Season Preparation Day at WFO Tucson, AZ: The Operational Staff at WFO Tucson recently participated in a full day of training, covering many aspects of the upcoming convective weather season, when most of the office's severe weather occurs. WFO Phoenix assumed Tucson's forecast responsibility for the day, allowing the entire Tucson operations staff to take full advantage of the training. Topics included science of the "Southwest Monsoon" (and associated convection); sounding analysis; pending NWS product changes; IFPS, WSR-88D, and NOAA Weather Radio updates; and WFO policy reminders. Phoenix further supported WFO Tucson by allowing one of their own SCEP students, who will soon be working at the Tucson office, to attend. The ability for the entire Tucson operational staff to attend simultaneously to discuss critical public service issues made the day extremely beneficial for all.



Brandt Maxwell (on right) with a forecaster at CHMI

San Diego Forecaster Visits Czech

Hydrometeorological Institute: After working in the NWS for 9 years, San Diego forecaster Brandt Maxwell became interested in how meteorologists operate in other countries. During a recent vacation to Europe, Brandt toured the headquarters of the Czech Hydrometeorological Institute (CHMI) in Prague, Czech Republic.

CHMI has a staff of about 800 people and produces general weather, aviation, hydrologic, and air pollution forecasts for the Czech Republic. Many of the forecasters work at CHMI headquarters, on the outskirts

of Prague. There are also seven branch offices, similar to the pre-modernization NWS Offices (WSOs). These offices manage data collection for the agency, run hydrologic models, and disseminate data to the public and businesses. Service areas for each branch offices are determined by hydrologic basins.

CHMI operates two radars -- one near Prague and the other near the city of Brno. Meteorologists also use data from a Polish radar to help fill the gaps in the northern parts of the country. CHMI runs its own numerical model, called ALADIN. Output is

available on the Internet at http://www.chmi.cz/meteo/ov/aladin/res/index.html. Other models used include the ECMWF, Germany's Offenbach model, and the GFS. A very high-resolution model is also in the development process.

Brandt observed that CHMI personalities and work habits seemed quite similar to NWS forecasters. They cope with rotating shifts, issue public forecasts four times per day (with updates as needed), and also issue eight terminal aviation forecasts (TAFs) per day. In contrast to NWS, which is 100 percent publicly funded, CHMI receives 40 percent of its funding from their private sector (including the media). As a result, businesses can request specialized products.

The experience was a very enjoyable and educational one for Brandt. He recommends it to any forecaster who enjoys foreign travel.

<u>IMET Presentation</u>: On May 18, Basil Newmerzhycky (WFO Sacramento IMET) gave a presentation in Davis, California, as part of the Cutting Edge of Science lecture series. Basil's lecture title was "The Life of an Incident Meteorologist". It focused on how the IMETs are an integral part of a fire camp, how their forecasts help the firefighting effort, and the potential lifesaving aspect of these critical forecasts. The lecture also included a discussion of the many other types of weather and hazmat incidents the IMET might be called upon to assist.

The lecture series is sponsored by the Explorit Science Center in Davis and hosted by the local public library. The lectures are designed to bring science to a wide age-range audience and to show how it is a part of our everyday world. The audience was very engaged in Basil's topic and presentation and asked many questions.



Pat Mead, Director of Public Works, San Bernardino County receives an award for outstanding service to the community from WFO San Diego MIC Jim Purpura

WFO San Diego presents award to San Bernardino County Emergency Management: After the devastating floods last Christmas in the Southern California fire burn areas, including floods that killed 16 people in the Lytle Creek and Devore areas, WFO San Diego and San Bernardino County combined efforts to develop the FAST (Flood Area Safety Task Force) Team. This team worked to establish triggers for county response based on NWS rain forecasts, as well as Flash Flood Watches and Flash Flood Warnings. The plan also dramatically increased level and frequency of communication between spotters, Emergency Managers, and the NWS.

As a result of the Team's efforts, the NWS and San Bernardino County brought forth an unprecedented level of cooperation. In grateful appreciation, WFO San Diego presented the county with an award for their work in helping save lives and property in San Bernardino County.



(L to R) Pierce College President Phil Stein, WFO Los Angeles/Oxnard Warning Coordination Meteorologist Tim McClung, and Pierce College Campus Operations Director Bill Russell.

Pierce College Gets Weather Observing Station:

On May 19, WFO Oxnard staff participated in a press conference at Pierce College, celebrating a new onsite weather observing station which will now automate the local site which has recorded weather observations for nearly 55 years. Representing WFO Oxnard at the press conference were WCM Tim McClung (guest speaker) and Cooperative Program Manager Dessa Garton.

The new Campbell Scientific MetData-1 weather recording station is supported by a 10-foot aluminum tower and sensors which will record solar radiation, precipitation, relative humidity, dew point, and

maximum and minimum and current air temperatures in Fahrenheit and Celsius. Atmospheric pressure, wind speed, and direction are also recorded. The data is automatically updated every 15 minutes and is fed to the college web site via the internet and will be available on an "hourly observational summaries" issued by WFO Oxnard for use by the local media.

At the press conference, attended by nearly 100 persons and some media affiliates, WFO Oxnard presented Pierce College with a Special Recognition Award for their ongoing partnership in taking weather observations for nearly 55 years.



WFO Monterey staff members David Soroka and Shawn Weagle speak to a mariner.

American Safe Boating Week: Members of the Monterey and Sacramento WFOs joined forces to staff a booth at the Berkeley Marina on May 23, 2004, in support of North American Safe Boating Awareness Week. The Berkeley Yacht Club sponsored the event, and it was well attended by club members and their families as well as the many others who use the marina. A highlight of the event was a helicopter rescue demonstration by the U.S. Coast Guard and a tour of one of their rescue boats. The NWS members answered many questions regarding new digital forecasts and its usefulness for the marine community.



(L to R) Dr. Luis Farfan and Miguel Miller review the electronic dictionary for the new Spanish-language NWR.

International Visitor Aids San Diego's Spanish-language NOAA Weather Radio Efforts:

Dr. Luis Farfan, a weather researcher from La Paz, Mexico is no stranger to WFO San Diego. In the past, Dr. Farfan has visited the San Diego NWS to give presentations on Tropical Cyclones striking Baja California, and he regularly consults with the San Diego office on matters related to operation weather forecasting, as he explains weather to grade school students in both Mexico and San Ysidro, California.

Dr. Farfan's most recent visit to WFO San Diego was to continue to gather research material on tropical

cyclones and to review the efforts to ready the electronic pronunciation dictionary for the new Spanish-language NOAA Weather Radio. The transmitter is expected to be ready for California's Coachella Valley (Palm Springs area) this summer.



(L to R) Al Schmidt and Carol Seymour, of Agilent Technologies, receive a certificate from Spokane MIC John Livingston and WCM Ken Holmes

Supporter: On June 16, WFO Spokane presented a certificate to Agilent Technologies, Inc., in Spokane, Washington, signifying the organization as the first organization nationwide to meet the criteria for a new program called NWS StormReady Supporter. The prototype program was established to acknowledge businesses, hospitals, schools, shopping centers and malls, nuclear power plants, and other nongovernmental entities that promote severe weather safety plans while actively participating and promoting severe weather safety awareness activities. With approximately 28,000 employees throughout the world.

Agilent serves customers in more than 110 countries and delivers innovative technologies, solutions, and services to a wide range of customers in communications, electronics, life sciences, and chemical analysis.

HYDROLOGY AND CLIMATE SERVICES DIVISION



(L to R) Taking in the beautiful scenery of Central Idaho's Sawtooth Mountains are Chad Carey (NWRFC Hydrologist), Jim Meyer (Pocatello MIC), Kevin Berghoff (NWRFC Hydrologist), Dean Hazen (Pocatello SOO), Robyn Heffernan (Boise Hydrologic Focal Point), Vern Preston (Pocatello WCM), and Sherrie Hebert (Pocatello Service Hydrologist).

WFO Pocatello Staff Completes Hydrologic Tours:

WFO Pocatello staff members recently wrapped up a series of extensive hydrologic tours of the Pocatello Hydrologic Service Area (HSA). The purpose of the tours was two-fold. Primarily, the tour offered opportunities to spend time with local emergency management who shared their extensive experiential knowledge of the flood-prone areas in the HSA. Secondly, it provided an introduction to the area for Jim Meyer (MIC) and Sherrie Hebert (Service Hydrologist). Dean Hazen (SOO) and Vern Preston (WCM) helped lead the tours and provided their additional experience from an NWS perspective. The hydro tours covered the major basins in Eastern Idaho with an emphasis in the Blackfoot, Idaho area that was inundated by flooding in 1997.

Also joining the tours included NWRFC Hydrologists Kevin Berghoff, Chad Carey, Steve King, Dan Matusiewicz, and Fain McGough. Jay Briedenbach (Boise Service Hydrologist) and Robyn Heffernan (Boise Hydrologic Focal Point) participated as well for part of the tours.

SCIENTIFIC SERVICES DIVISION

<u>Teletraining Sessions for July</u>: The Virtual Institute for Satellite Integration Training (VISIT) and the Integrated Sensor Training Professional Development Series (ISTPDS) sessions for July are listed below.

To register for teletraining send an email to: visit@comet.ucar.edu
The teletraining calendar is at: http://www.cira.colostate.edu/ramm/visit/ecal.asp

The teletraining planning calendar with sessions offered by the Interactive Forecast Preparation System (IFPS) PDS and Warning Decision Training Branch (WDTB) is at: http://www.cira.colostate.edu/ramm/visit/planning.html

The sessions currently scheduled for July are:

- Interactive Cloud Height Algorithm and GOES Sounder Point Retrievals in AWIPS (Basic, July 12,21,27)
- C Water Vapor Channel Satellite Imagery (Basic, July 14)
- C The Enhanced-V: A Satellite Severe Storm Signature (Basic, July 28)
- C Lightning Meteorology I

(Basic, July 6)

- C Lightning Meteorology II (Advanced, July 7)
- Use of GOES/RSO imagery with other Remote Sensor Data for Diagnosing Severe Weather across CONUS (RSO 3)
 Part 1 (Intermediate, July 13,27)

Part 2 (July 14,28)

All sessions can be reviewed in advance by following the instructions in the student guides available on the ISTPDS/VISIT page: http://www.cira.colostate.edu/ramm/visit/visithome.asp

USWRP Analysis of Record Workshop: You are invited to attend a workshop, sponsored by the U.S. Weather Research Program, that will examine the challenges of mesoscale objective analysis. A Community Meeting on Real-time and Retrospective Mesoscale Objective Analysis: An Analysis of Record Summit, co-chaired by Brad Colman (WFO Seattle) and John Horel (University of Utah) will examine the needs, data assets, and current and future technologies required to develop accurate mesoscale objective analyses for real-time and retrospective applications.

Date: June 29-30, 2004

Where: David Skaggs Research Center GB124, Boulder, Colorado Contact: Brad Colman: (206) 526-6092 x224 brad.colman@noaa.gov

John Horel: (801) 581-7091 jhorel@met.utah.edu

This gathering has been designed to promote creative and free-wheeling discussion, and we hope to have representation from a broad cross section of the community.

Members of the Workshop should include participants with diverse scientific expertise, including but not necessarily limited to: observing systems, data assimilation methods, mesoscale meteorology and modeling, operational forecasting, and regional climate. Additionally, participants should reflect stakeholder groups, economists and weather business, and be balanced among the private, public, and academic sectors.

In addition to a publication of a summary of this meeting in BAMS, the end product of the Workshop should be a blueprint and rationale for a research and development program that can lead to an advanced, cohesive, and financially viable operational mesoscale objective analysis system that can support scientific efforts and diverse applications.

Limited travel support will be available for those unable to find travel funding from other sources. Other meetings will be taking place in Boulder at this time; make your hotel reservations early.

Registration will be limited to 75 participants. To register before June 10, please go to the USWRP's meetings web site:

http://box.mmm.ucar.edu/uswrp/upcoming_meetings/upcoming_meetings.html.

New Western Region Technical Attachments: Three new Western Region Technical Attachments may be found on the Western Region Home page at http://www.wrh.noaa.gov under On-line Publications.

- C A Modified Total Totals Index for Thunderstorm Potential over the Intermountain

 West
 by Rhett Milne, WFO Reno
- Estimates of Buoyancy, Shear, and Precipitable Water Thresholds for Active Severe Thunderstorm and Active Flash Flood Days in Southeast Arizona by Jessica Mendoza, WFO Tucson
- Day 5 Minimum and Maximum Temperature Forecast Errors and the Improvement Efficiency of Making Changes by Rhett Milne, WFO Reno

<u>WES Technical Attachment Lites Due June 15, 2004</u>: TA-Lites on a summer WES case was due from each WFO by June 15, 2004. If you haven't already done so, please notify WR SSD that you have completed office training on your two summer WES cases.

North American Monsoon Experiment Update: The North American Monsoon Experiment (NAME) is gradually getting underway. On June 6, the NAME Forecast Operations Center began to issue guidance forecasts for the Tier-I region in northwest Mexico and the Southwest U.S. On June 17, the NAME roll out press conference will be held at the NWS office in Tucson, AZ. Finally on June 21, the Extended Observational Period (EOP) will get underway and will continue through August 31.

Details on the experiment, including the daily forecast guidance for the NAME decision makers, can be found at http://www.joss.ucar.edu/name.

SYSTEMS OPERATIONS DIVISION

<u>Facilities</u>: Tom Page and Mike Hume traveled to Billings last week to accomplish a fuel system upgrade for station back-up power which included installing a fuel return line from inside day tank to the outside storage tank. They also serviced generators and performed systems check out within the Billings County Warning Area.

<u>Phone Training Status</u>: The Norstar Training curriculum is being finalized and will be completed by the end of July. Following the completion of the Norstar training curriculum, two Norstar training classes (6 students per class) are planned for this fiscal year, one class at WRH in August and one additional class in September. The location of the final class is yet to be determined, possibly in southern California.

<u>ASOS:</u> George Montenegro spent a week in Hanford, California in support of the Electronics Program for WFO San Joaquin. George performed PMs on the ASOS equipment.

NWR: The Nogales, AZ NOAA all hazards transmitter was installed on June 15. The transmitter was purchased with Region funds and was installed by Merri Richmond, Joe Lachacz, and Kris Johnson (TWC). The transmitter is in its 20 day test period.

AWPAG: Kevin Bolton is assisting the Missoula WFO install of the All Weather Precipitation Accumulation Gauge foundation. This particular install was more complex due to local obstructions and various land owner issues.

ASOS All Weather Precipitation Accumulation Gauge (AWPAG) Support

Equipment: OPS11 prepared and shipped seven sets of AWPAG maintenance support equipment to the first seven WFOs targeted to receive production deployment AWPAGs. The kits are being provided concurrent with the initial AWPAG shipment. Each WFO will receive one kit. Kits have been provided to the Training Center and 16 operational assurance test sites.

<u>OPS/SOD Board Meeting</u>: Western Region hosted this year's Office of Operations and Systems Operations Division Chiefs Board Meeting. The OPS/SOD Board Meeting was held in Park City, Utah on June 15-16.